

# Ravensdown PGP Programme Quarterly Progress Report

Contract reporting period: October-December 2016

PSG Meeting Date: 3/3/17

Prepared by: Mike White Technical Development Manager

Updated: 12 March 2017

Printed: 12 March 2017

---

## Summary of progress during this quarter

The planned spring 2016 sampling at Moana Station was compromised by continual southerly fronts moving through the bottom of the South Island. However the programme plans to capitalise on good late summer conditions and conduct the programme's first validation remote surveys on Patitapu Station in the Wairarapa and Moana Station in Otago. The validation surveys are designed to test the robustness of early remote sensing calibrations (to produce predictions of soil fertility remotely).

To date approximately 7,165 soil and 6,935 plant tissue samples have been collected. This represents the most comprehensive dataset taken in New Zealand for the purpose of developing remote sensing technology to improve the identification of nutrient requirements across NZ hill country. Results relating pasture nutrient levels to sensing data continue to suggest very robust calibrations are achievable. The relationships with underlying soil fertility is now the current focus of the programme. Early soil fertility calibrations have shown promise however these need to be fully tested on farms outside those in the current research programme to evaluate their robustness.

Planning was also finalised during this quarter for an independent review to support the programme's science advisory group on future recommendations. The review encompasses procedures around data collection, handling and statistical approaches employed to develop calibrations.

Software aimed at supporting fertiliser recommendations has been developed which is capable of incorporating soil fertility predictions at high resolutions such as may be achieved from remote sensing. The software output is currently being evaluated on the programme's focus farms.

## Key highlights and achievements

- Completion of Prototype decision support software.

## Upcoming

- Complete the sampling events aimed to validate (test) remote sensing calibrations.
- Independent review encompassing procedures around data collection, handling and statistical approaches employed to develop calibrations.
- Field day events updating the progress of the programme are scheduled for Patitapu Station on 23<sup>rd</sup> March and on Erewhon Station on the 11<sup>th</sup> April.

## Investment

<i>Investment period</i>	<i>Industry contribution</i>	<i>MPI contribution</i>	<i>Total investment</i>
<i>During this Quarter</i>	\$0.086m	\$0.086m	\$0.17m
<i>Programme To Date</i>	\$3.016m	\$3.016m	\$6.03m

---